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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,663	06/21/2001	Shantha Sarangapani	103.215.118	4750
23483	7590	05/18/2004	EXAMINER	
HALE AND DORR, LLP 60 STATE STREET BOSTON, MA 02109			PAK, JOHN D	
			ART UNIT	PAPER NUMBER
			1616	

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,663

Applicant(s)

SARANGAPANI ET AL.

Examiner

JOHN D PAK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1,2 and 4-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/17/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claims 1-2 and 4-20 are pending in this application.

Applicant's election on 2/17/04 of the invention of Group III is acknowledged. However, upon initiating a search of the invention of Group III, it became clear that Group III is actually comprised of several distinct inventive concepts. Each different type of laminating layer has developed separately in terms of product, research and literature, and the prior art relevant to one type of laminating layer in the protective materials art would not be relevant to another type of laminating layer. For example, prior art relevant to the ion pair complex of polyallylamine hydrochloride and sodium polyvinyl sulfonate may be relevant to the laminating layers of claims 7, 11 and 15 but not applicable to the laminating layers of claims 6, 8, 10, 12, 14 and 16, in the absence of nexus type art. A separate prior art review and separate grounds of rejections, if appropriate, would be necessary for each of the inventive. Therefore, with a better understanding of the state of the art *a posteriori*, the restriction requirement set forth in the Office Action of 1/12/2004 must be modified as follows.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claim 1-2, drawn to an antimicrobial and chemical deactivating composition comprising nanosize or submicron size particles of silver, silver-copper alloy, chemical compounds of copper, iron, molybdenum and zinc pyrithione, **and** an antimicrobial composition comprising nanosize or submicron size silver, silver-copper alloy, copper, iron, molybdenum and

zinc pyrithione as a powder, dispersion or encapsulated composition with a polymeric hydrogel selected from acrylates, hydrophilic polyurethanes, pva, natural biopolymers, polyacetic acid and acrylamides, classified in class 424, subclass 489+.

- II. Claim 4, drawn to a method for reducing the exposure to or for deactivating chemical and biological warfare agents and other toxic organic vapors at the surfaces of materials, comprising incorporating an antimicrobial and a chemical inactivating agent in porous fluoropolymers with a sandwich layer or crosslinked copolymers with plasticizers and additives with the cross linking agents glyoxal, formaldehyde, and titanium triamino isopropoxide, classified in class 588, subclass 200+.
- III. Claim 6, 10 and 14, drawn to an antimicrobial and chemical agent deactivating material comprising a laminating layer for providing a physical barrier to chemical vapors while permitting moisture to pass through said layer and catalytic and/or antimicrobial deposited, wherein the laminating layer, catalytic material and antimicrobial are "carbon free," classified in various subclasses in classes 424 and 514, for example, class 424, subclass 402+.
- IV. Claim 7, 11 and 15, drawn to an antimicrobial and chemical agent deactivating material comprising a laminating layer for providing a physical

barrier to chemical vapors while permitting moisture to pass through said layer and catalytic and/or antimicrobial deposited, further comprising an "assembly of positively charged polymers self assembling with negatively charged polymers to form a water insoluble electrostatic barrier, classified in various subclasses in classes 424 and 514, for example, class 424, subclass 402+.

- V. Claim 8, 12 and 16, drawn to an antimicrobial and chemical agent deactivating material comprising a laminating layer for providing a physical barrier to chemical vapors while permitting moisture to pass through said layer and catalytic and/or antimicrobial deposited, wherein the laminating layer comprises polyvinyl alcohol applied to an expanded microporous polytetrafluoroethylene film wherein the polyvinyl alcohol is cross linked, classified in various subclasses in classes 424 and 514, for example, class 424, subclass 402+.
- VI. Claim 17, drawn to an antimicrobial and chemical deactivating mixture comprising catalytic material for providing chemical deactivation, an antimicrobial, and polyvinyl alcohol, wherein the three ingredients are blended to form a mixture, classified in various subclasses in classes 424 and 514, for example, class 514, subclass 772.2.

- VII. Claims 18-19, drawn to an antimicrobial and chemical deactivating material comprising a laminating layer of *plasma* treated polyvinyl alcohol for providing a physical barrier to chemical vapors while permitting moisture to pass through, catalytic material deposited on the laminating layer and an antimicrobial deposited on said catalytic material, classified in various subclasses in classes 424 and 514, depending on, inter alia, scope of "plasma."
- VIII. Claim 20, drawn to an antimicrobial and chemical deactivating textile finish coating composition comprising polyurethane and an antimicrobial blended with said polyurethane, classified in various subclasses in classes 424 and 514, for example, class 424, subclass 409+.

Claims 5, 9 and 13 link(s) inventions III, IV and V. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim(s), claims 5, 9 and 13. Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or

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nonstatutory double patenting rejections over the claims of the instant application.

Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The eight inventions as set forth above are independent inventions, or in the alternative, they are at least distinct over the other inventions. The differences which make each invention independent or distinct are specified above. Each invention utilizes various materially different ingredients and/or structures to achieve the intended effect. Note, to the extent that Groups I and II can be considered related composition and process of using thereof (in fact, they are not so related due to compositional differences), the composition as claimed is distinct because it can be used in a materially distinct process, such as incorporating the composition in a agrochemical product to provide fertilizer, plant growth regulating and/or algicidal properties.

Each invention demand a search and examination burden that would be extremely time consuming and serious. The claim language is broad and the prior art is extensive. There is very little overlap between the searches and prior art that would be particularly pertinent to more than one invention group. To search more than one independent or distinct inventive concept, as outlined above and discussed previously, would place an undue burden on the Examiner if the restriction were not required.

Therefore, for the reasons of independence or distinctness and undue burden, the restriction requirement as set forth above is deemed to be proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is invited to telephone the Examiner in order to expedite the further handling of this application, in view of this second restriction-only Office Action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**, **effective February 3, 2004**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Thurman Page, can be reached on (571)272-0602, effective February 3, 2004.

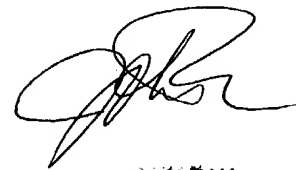
The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

A handwritten signature in black ink, appearing to be 'JP', written in a cursive style.

**JOHN PAK
PRIMARY EXAMINER
GROUP 1600**